

Appl. No.: 10/813,772
Amendment dated 4/5/2007

Attorney Docket No. DN 03-013

REMARKS

Claims 1-18 are pending in this application. Claims 14-16 are withdrawn from consideration. Claims 1-13, 17 and 18 are rejected in the Office Action.

In the accompanying Listing of Claims, claims 1, 3, 4, 6, 7, 9, 11, 12 and 17 are amended and new claims 19-24 are added. Claims 3, 4, 6, 11 and 12 are amended to depend from claim 1, and claim 9 is amended to depend from claim 7. After entry of the amendment, claims 1-13 and 17-24 remain pending.

Elections/Restrictions

Applicant confirms the election of Group I, claims 1-13 and 17-18, drawn to a method of making precipitated calcium carbonate. This election is made without traverse. This election should in no way prejudice Applicant's right to pursue a divisional application for the non-elected invention of Group II, claims 14-16.

Claim Rejections Under 35 U.S.C. § 112

Claims 7-9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action states that claim 7 appears to be drawn to three different groups:

Group 1: Sodium salts of co-polymers of acrylic acid and diallyldimethylammonium chloride (DMDAAC).

Group 2: Sodium salts of co-polymers of acrylic acid and methyl chloride quaternaryamine of dimethylaminoethylacrylate (DMAEA:quaternaryamine), and

Group 3: Acrylic acid (AA) - DMDAAC:quaternaryamine copolymer.

The Office Action further states that claim 7 is indefinite as to how many groups are claimed in claim 7 and which chemicals belong to each group.

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Claim 7 has been amended to recite an amphoteric dispersant selected from the group consisting of sodium salts of co-polymers of acrylic acid and diallyldimethylammonium chloride. New claim 19 recites an amphoteric dispersant selected from the group consisting of sodium salts of co-polymers of acrylic acid and methyl chloride quaternaryamine of dimethylaminoethylacrylate. New claim 22 recites an amphoteric dispersant selected from the group consisting of an acrylic acid and a diallyldimethylammonium chloride:quaternaryamine copolymer. Withdrawal of this rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-6, 10-13 and 17-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,783,038 to Donigian et al. ("Donigian") in view of Japanese Kokai Patent No. Hei 09-194669 ("Hei"). This rejection is respectfully traversed.

The action alleges that Donigian discloses all recited elements of claim 1 except for milling the precipitated calcium carbonate in the presence of an amphoteric or anionic dispersant to produce a precipitated calcium carbonate product. The action further alleges that it would have been obvious to form the process of Donigian to include the step of milling the precipitated calcium carbonate in the presence of an amphoteric or anionic dispersant to produce a precipitated calcium carbonate product in view of the teaching of Hei.

There would have been no suggestion or motivation at the time Applicant's invention was made, based on the teachings of Donigian, for one of ordinary skill in the art to produce a precipitated calcium carbonate (PCC) for ink jet recording paper wherein the PCC is screened and dewatered prior to milling in the presence of an amphoteric or anionic dispersant. Furthermore, there would have been no suggestion or motivation based on the teachings of Donigian to produce a precipitated calcium carbonate (PCC) for ink jet recording paper wherein a second amount of an organophosphonate is added to the PCC prior to milling in the presence of an amphoteric or anionic dispersant.

Donigian discloses an ink jet recording paper having a coating containing a heat aged precipitated calcium carbonate (PCC). Donigian further discloses adding an organophosphonate to

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the PCC prior to heat aging the PCC, wherein the organophosphonate is added to control the extent or degree of heat aging of the PCC (col. 4, line 66-col. 5, line 5). There would have been no teaching, suggestion or motivation at the time Applicant's invention was made, based on the teachings of Donigian, for one of ordinary skill in the art to add an organophosphonate prior to milling in the presence of an amphoteric or anionic dispersant. Furthermore, Donigian does not disclose or suggest screening and dewatering PCC and then milling the screened and dewatered PCC in the presence of an amphoteric or anionic dispersant. There would have been no motivation to modify the process as disclosed in Donigian for making PCC to obtain a process suitable for producing PCC for ink jet recording paper as recited in claim 1 of the present application.

Hei fails to cure the deficiencies of Donigian, with respect to the features of claim 1. Hei does not disclose or suggest a process for producing a precipitated calcium carbonate (PCC) for ink jet recording paper wherein the PCC is screened and dewatered prior to milling in the presence of an amphoteric or anionic dispersant. Furthermore, Hei does not disclose or suggest a process for producing a precipitated calcium carbonate (PCC) for ink jet recording paper wherein a second amount of an organophosphonate is added to the PCC prior to milling in the presence of an amphoteric or anionic dispersant. Therefore, Hei does not correct the deficiency of Donigian because the combined teachings do not disclose the invention recited in claim 1. Hei does not contemplate the process for producing PCC for ink jet recording paper recited in claim 1. Furthermore, there would have been no suggestion or motivation to combine and/or modify the teachings of Donigian and Hei to arrive at the process for making PCC for ink jet recording paper as recited in claim 1.

Applicant respectfully submits that claim 1 is allowable over the Donigian and Hei references. Withdrawal of the rejection of claim 1 and its allowance are respectfully requested.

Claims 2-6, 10-13 and 18 depend from claim 1, which is allowable over the cited references. Because a dependent claim incorporates every element of its parent claim, claims 2-6, 10-13 and 18 are also allowable over the cited references. Allowance of claims 2-6, 10-13 and 18 is also requested.

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For at least the above reasons, claim 17 is also allowable over the cited references.
Allowance of claim 17 is also requested.

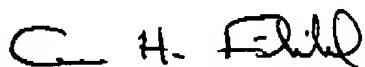
CONCLUSION

The pending claims as amended are in condition for allowance. Should Examiner not agree with Applicant's position, then a telephone interview is respectfully requested to discuss any remaining issues and expedite the eventual allowance of the application.

Please charge any additional fees due for the filing of this amendment and response to Minerals Technologies Inc. Deposit Account No. 13-3639.

Respectfully submitted,

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